

# Notes on *Byrrhidae* (Col.); with Special Reference to, and a Species New to, the British Fauna

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## I. THE GENUS *SYNCALYPTA* S.L.

A study of the British species attributed to this genus revealed that *S. (s.str.) spinosa* (Rossi) on the one hand, and *S. (Curimopsis) setigera* (Illiger) and *S. (C.) striatopunctata* Steffahny on the other, clearly belonged to different genera. A literature search was then undertaken and proved interesting. It was found that whilst the above nomenclature (i.e. one genus) has always been recognised by all European workers, two genera in fact are recognised in North America, namely *Syncalypta* and *Curimopsis*. The first person to elevate the latter to generic rank seems to have been Casey (1912: 35). He based his separation on the rather broader elytral epipleura anteriorly in *Syncalypta*, as well as the sparser sculpture and more minute size. More recently El Moursy (1961: 13-14), in raising the Syncalptinae to the family level—a procedure not followed by subsequent workers, has used different key characters to separate the two genera, utilising only the size difference quoted by Casey (*l.c.*). El Moursy's separation is primarily based upon the presence of two oblique grooves on the frons, and the lack of scales on the integument, in *Syncalypta*. My own studies, based on four species of *Syncalypta* and several *Curimopsis*, have produced a number of additional characters, which seem to me to give a better justification for recognising two genera. Before going into this matter, however, there is a question of nomenclature to be settled.

Traditionally, the name *Syncalypta* Stephens (1830: 128, 133) has always been assumed to be the valid name for "*Syncalypta*" in the European sense. Dalla Torre (1911: 31) gives one other name as a synonym, *Chaetophorus* Kirby and Spence, to which he attributes the date 1818. In fact the original reference to this name is *Chaetophora* Kirby and Spence 1823 (edition 3, 2: 258), quoted by Neave (1939: 659). Stephens, in his Systematic Catalogue of British Insects (1829: 99), uses the generic name *Chaetophora* Kirby, but adds a footnote "*Chaetophora*—Genus Fungorum. Vide Grevilles Cryptog. of Scotland", and in his next work (1830: 133), describes the genus as *Syncalypta* Dillwyn. It is not generally known that Dillwyn (1829: 25) offered the name *Syncalypta* as a replacement for *Chaetophora* Kirby and Spence, referring to the prior use of the latter in fungi. However, some discussion must have taken place between Kirby and Stephens, or at any rate Kirby must have been aware of the fungus name, since in a later edition of their work (1828, edition 5, 2: 258) Kirby and Spence changed the name to *Chaetophorus*, without explanation. Contrary to the treatment of both Dillwyn and Stephens, the presence of a fungus with the name *Chaetophora* does not affect the validity of Kirby and Spence's name

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(1823), which is therefore available. The later form, *Chaetophorus*, is an unjustified emendation.

The type species of *Chaetophora* is *Georyssus cretifer* Kirby, first mentioned by Kirby and Spence in 1817 (2: 258), although one must admit that the description is superficial in the extreme. More usually, the authorship of *cretifer* is attributed to Stephens (1830: 133), who gave a more adequate description, which species has always been placed as a synonym of the well-known *spinosa* (Rossi). This identity is not in doubt, due both to the descriptions of Stephens, and the presence of specimens in his cabinet. The type species of *Syncalpyta* is given by Westwood (1840: 21) as *arenaria* (Sturm), a further synonym of *spinosa*.

Thus *Chaetophora* Kirby and Spence 1823 becomes the valid name for *Syncalpyta* Dillwyn, 1829 (Stephens, 1830) s.str., and the "subgenus" *Curimopsis* Ganglbauer 1902 should be elevated to generic rank.

Amongst other characters, *Chaetophora* and *Curimopsis* may be immediately distinguished from all other British Byrrhidae by the more V rather than T-shaped prosternal process, presence of outstanding setae—usually clubbed—instead of normal pubescence, little-distinct eyes in front view, and the more abrupt and short antennal club. Apart from a number of differences in the mouthparts, especially the maxillae, the two genera may be readily separated by the following key, which is not restricted to purely European forms:

A Size small, 1.2-1.6 mm. Dorsum with setae. Frons impunctate, with a pair of conspicuous oblique furrows, basally converging and almost meeting in a V-shape; front of frons with a submarginal impressed line. Mandibles tridentate, the dorsal tooth weaker. Antennal segment 3 shorter than 4, segments 9 and 10 strongly asymmetrical and resulting in a compact and apically truncate club. Elytral striae not impressed, indicated as rows of large punctures. Prosternal process of a broad V-shape, apex strongly rounded. Hind coxae obviously separated, the intercoxal process conspicuous, and with a submarginal impressed line. First visible abdominal sternite with the intercoxal process strongly rounded and broad apically, the sides evenly contoured. [All zoogeographical regions (see below) except Australasia] ..... *Chaetophora* Kirby & Spence

— Size larger, 1.9-3.3 mm. Dorsum with setae and scales. Frons punctate, furrows and an impressed submarginal line absent. Mandibles strongly quadridentate. Antennal segment 3 longer than 4, segments 9 and 10 almost symmetrical, the club loose and apically rounded. Elytral striae finely impressed, and with rows of small punctures. Prosternal process of a narrow V-shape, apex somewhat pointed. Hind coxae almost touching, the intercoxal process without a submarginal impressed line. First visible abdominal sternite with the intercoxal

process bearing a short, blunt projection at the tip, the sides sinuate near the middle. [Holarctic and Oriental regions] ..... *Curimopsis* Ganglbauer

## II. A NEW SPECIES OF CHAETOPHORA FROM NIGERIA

From consulting descriptions and/or specimens†, it seems that very few species of *Chaetophora* are known, as almost all described "*Syncalypta*" really belong to *Curimopsis*. However, the following should be included in *Chaetophora*: †*spinosa* (Rossi, 1794) — Europe; *minuta* (Reitter, 1884) — S. Russia and Greece; †*japonica* (Nakane, 1963) — Japan; *tesselata* (LeConte, 1850) — U.S.A.; *striata* (Pic, 1922) — Brazil; *suturalis* (Pic, 1922) — Vietnam; †*pilosella* (Motschulsky, 1858) — India, Ceylon and Burma. Thus the absence of any record of a species from the Afrotropical zoogeographical region makes desirable the description of the following species.

† Indicates species examined by me. — C.J.

### *Chaetophora medleri* sp.n.

Length 1.31-1.42 mm.; breadth 0.99-1.10 mm. Form very short oval, only slightly longer than broad. Colour reddish-black, more-or-less darkened; legs reddish-brown, antennae yellowish-brown. Surface shining beneath the encrustations; covered with conspicuous pale brown and apically thickened, outstanding setae, the setae near the elytral edges c. 0.065 mm. in length. Head with the submarginal line interrupted in the middle. Antennal structure similar to that of *spinosa*. Pronotum slightly sinuate near the front angles, otherwise shaped much as in *spinosa*; surface somewhat sparsely punctured, the punctures shallow and often poorly formed basally. Elytra with coarse and close punctures arranged in rows as striae; sutural striae near the apex deeply grooved; lateral striae beyond the humeral callus not deeply grooved, similar to the other striae. Venter coarsely and somewhat sparsely punctured, the last three visible abdominal sternites excepted; metasternum with the area along and around the median longitudinal line impressed; fifth visible sternite with a median forvea. Male: aedeagus characteristic, fig. 1.

Holotype ♂. NIGERIA — S.W. State: Badeggi RRS, 19.iii.1972, leg. J. T. Medler (in Manchester Museum).

Paratypes. Same data, 3 ♀.

*Dedication.* It is a pleasure to dedicate this new species to Prof. John T. Medler, formerly of Ile-Ife University.

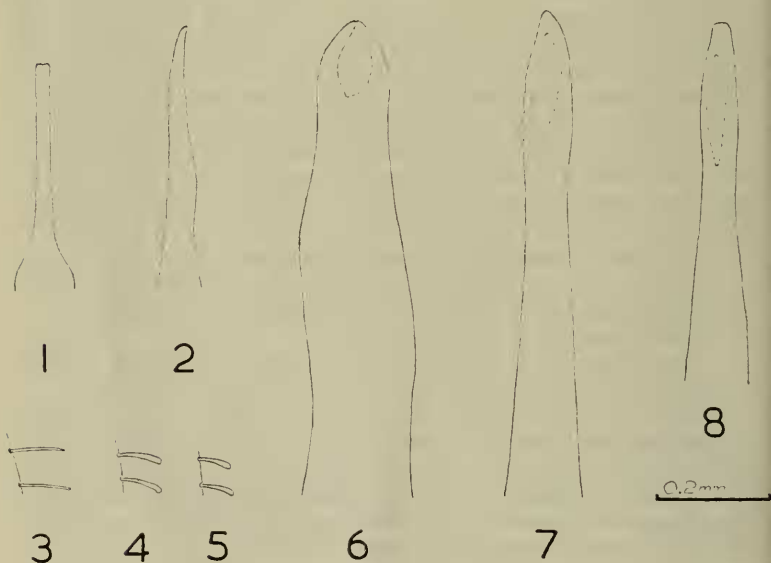
*Remarks.* Compared with the European *spinosa*, this species differs in the following features: colour more reddish; head with submarginal line interrupted in the middle at the front; lateral stria of elytra beyond the humeral callus not deeply grooved; setae of the whole body pale brown, and very slightly longer; aedeagus different, cf. figs. 1-2.

## III. THE IDENTITY OF CISTELA MARITIMA MARSHAM

*Cistela maritima* was sunk as a synonym of "*Syncalypta*" (i.e. *Curimopsis*) *setigera* (Illiger) by Steffahny, in his monograph of the Byrrhids (1843: 34), a position which it still

occupies (e.g. Dalla Torre, 1911:32). Recent study on the British *Curimopsis* by the present writer has revealed that this treatment is erroneous.

Marsham (1802:105-6) described *maritima* on the basis of East Anglian specimens collected at Languard Fort, Suffolk, and Holme-next-the-Sea, Norfolk, by the Rev. W. Kirby. Marsham's collection is incorporated in the Stephensian collection in the British Museum (Nat. Hist.), but the only specimens standing over *maritima* have no labels to indicate their origin. Evidence from Stephens's publications suggests that he did not possess any specimens from Kirby or Marsham of this species. An examination of the Kirby collection in the same institution failed to disclose any specimens or the name of this species. However, one Kirby specimen has turned up in a surprising source. This is from the Joseph Sidebotham collection in the Manchester Museum, in which a single, pinned, large *Curimopsis* specimen was found, which bears the label "Kirby" printed in black on pink paper, precisely like those in Kirby's own collection. As this is the only authentic Kirby specimen known, and which agrees with Marsham's brief description, it is reasonable in the circumstances to designate it as a LECTOTYPE. This specimen, along with two others in the Stephens collection over the name *maritima*, are all identical with *striatopunctata* Steffahn (1843). Hence Marsham's name must have priority. Distributional data provided the first clue to the identity of *maritima*, when it was



FIGS. 1-2, aedeagi of *Chaetophora* spp.: 1, *C. medleri* sp.n.; 2, *C. spinosa* (Rossi). FIGS. 3-5, elytral setae of *Curimopsis* spp.: 3, *C. maritima* (Marsham); 4, *C. setigera* (Illiger); 5, *C. nigrita* (Palm). FIGS. 6-8, aedeagi of *Curimopsis* spp., dorsal view: 6, *C. maritima*; 7, *C. setigera*; 8, *C. nigrita*.

found that *setigera* is a western species in Britain, *striatopunctata* an eastern one. I have also seen the type of *hirsuta* Sharp, described from England, and can confirm its treatment as a synonym of the previously-known *striatopunctata*.

#### IV. THE BRITISH SPECIES OF CURIMOPSIS, WITH *C. NIGRITA* (PALM) NEW TO BRITAIN

Whilst sieving vegetational debris in a boggy situation with heather and peat on Thorne Waste, South Yorkshire, 15.iv.1977, I found a single specimen of a "*Syncalypta*" which, from the unusual biotope, I realised was probably something new to our fauna. Subsequent study revealed the specimen to be a female of *Curimopsis nigrata* (Palm). This determination was confirmed when my colleague Dr. Thure Palm generously sent me a male paratype of his species.

The discovery of this species on Thorne Waste is of considerable interest, in view of its limited continental distribution. It is only known at present from southern Sweden, Denmark, north Germany and northern Poland (Palm 1934, Bollow 1937, Franz 1967), and, unlike other species in the genus, is confined to lowland peat bogs in company with *Calluna*. Thus it is clearly a relict species at Thorne, and provides an interesting parallel with the occurrence at the same site of *Bembidion humerale* Sturm (Crossley & Norris, 1976), which I came across in the same sample of sievings.

Judging from the names attached to *Curimopsis* in British collections, there has been much confusion, especially over *setigera*, and many records are erroneous. Below is given a key to all the British species of this genus, together with records of personally-seen specimens of *maritima* and *setigera*.

1. Body long oval, more attenuate apically; outstanding setae long and thin, fig. 3, pale brown; abdomen very coarsely punctured. Length 2.2-2.9 mm. ♂: aedeagus fig. 6 ..... *maritima* (Marsham)
- Body short oval, more rounded at the sides and apically; outstanding setae shorter and thicker, apically thickened; abdomen more finely punctured ..... 2
2. Larger, 2.3-2.9 mm.; outstanding setae pale brown, slightly longer, fig. 4; elytra usually mottled with lighter scales, the humeri rounded. ♂: aedeagus fig. 7 .....  
*setigera* (Illiger)
- Smaller, 1.9-2.4 mm.; outstanding setae dark brown, slightly shorter, fig. 5; elytra not mottled, the scales dark, the humeri somewhat angulate. ♂: aedeagus fig. 8 ..... *nigrata* (Palm)

*Curimopsis maritima*. South-east England, north to Yorks., west to Dorset and Oxon.; in dry, sandy or chalky places, chiefly on or near the coast; very local but not uncommon. Yorks., S.E.: Spurn (Hincks). Suffolk, E.: Aldeburgh (Saunders). Suffolk, W.: Freckenham (Tottenham). Oxon.: Oxford dist. (Walker, Champion). Berks.: Tubney (Collins), Aldworth (Joy). Surrey: Mickleham (Power). Kent, E.: Chatham (Blatch, Walker), Sheerness (Blatch), Isle of Sheppey

(Walker), Iwade (Donisthorpe), Aylesford (Johnson), Kingsgate (Wood), Pegwell Bay (Johnson), Sandwich (Johnson), Deal (Power, Walker, Champion, Saunders, Donisthorpe, Johnson). *Sussex, E.*: Camber (Blatch, Collett, Tottenham), Hastings (Blatch, Ford), Seaford (Champion). *Hants., S.*: Lymington salterns (Donisthorpe). *Isle of Wight*: Niton (Johnson). *Dorset*: Weymouth (Blatch).

*Curimopsis setigera*. Western Britain, north to Dumfries, east to Hants. and Oxon.; in dry sandy places, chiefly on the coast; scattered and rare. *Dumfries*: Caerlaverock (Sharp). *Lancs., S.*: Southport (Chaster). *Glamorgan*: Llangenydd (Tottenham), Gower (Tottenham). *Devon, N.*: Braunton (Dollman, Blair, Eustace), Saunton (Eustace). *Devon, S.*: Seaton (Tottenham), Colyton (Ashe). *Dorset*: Charmouth (Donisthorpe). *Hants., S.*: Highcliffe (Donisthorpe). *Oxon.*: Watlington (Champion).

#### V. ADDITIONAL RECORDS OF BYRRHUS ARIETINUS STEFFAHNY

*Byrrhus arietinus* was first recorded from Britain by the writer (Johnson, 1966a), who observed that it seemed to have a northern range. Further data confirms this. In my experience the species is usually met with in upland areas beneath stones at the base of clumps of heather, sometimes walking on paths, chiefly from April to June, although I have seen it much more rarely in August and September. The following additional localities are known to me: *Aberdeens., S.*: Glen Quoich, Braemar (Johnson), Beinn a Bhuird (Johnson). *Ches.*: Robinsons Moss, Tintwistle (Johnson). My late friend W. O. Steel told me that he had found the species on Rhum (*pers. comm.*), and J. Thomas (*in litt.*) has collected it on Stribers Moss, N. Lancs. A specimen taken by P. Skidmore above Llangower, Merioneth, has also been recorded (Skidmore & Johnson, 1969: 194).

#### VI. A SECOND BRITISH RECORD FOR SIMPLOCARIA MACULOSA ERICHSON

Only a single British specimen of this very rare species is known, collected by sweeping along the River Ouse at Kelfield, S.E. Yorks., 14.v.1956, by J. Parkin (see Johnson, 1966b). It is of considerable interest to be able to provide further confirmation of this species in Britain. I recently detected two males of *maculosa*, with the characteristic mottled and depressed pubescence as well as aedeagus, amongst a series of *semistriata* (F.) taken by W. G. Blatch at Bewdley before the turn of the century. The antennae, however, seem not to be appreciably different from the last-named species, and this character, quoted in the above reference, may have been due to an accident of preparation and interpretation. I have also seen a few *semistriata* with barely a trace of microsculpture on the pronotum, so this character needs treating with caution. The habits of *maculosa* seem quite distinctive. According to Ganglbauer (1904: 60), it is to be found in central Europe at the edge of rivers and streams, amongst moss between stones on the banks. In the British Isles, *semi-*

*striata* on the other hand seems to occur fairly generally throughout the country at the roots of vegetation and in moss, in diverse habitats.

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CONSISTENCY OF AUTOGRAPHA GAMMA L. IN PEACEHAVEN, SUSSEX DURING 1977. — The Silver Y moth made appearances in the trap with great regularity during 1977, with numbers totalling 2,053. Between June 3rd and October 5th I noted *gamma* every night, in numbers varying from occasional singletons to a peak of 236 on August 16th. — COLIN PRATT, 5 View Road, Peacehaven, Sussex.